

Research on the Problems and Countermeasures in the Implementation of the 1+X Certificate System—Taking the Precision Intelligent Manufacturing Professional Group as an Example

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Abstract: *Currently, the 1+X certificate system has become one of the important contents of higher vocational education reform. However, in the professional group of precision intelligent manufacturing, the implementation of the 1+X certificate system faces some problems, such as single certificate types, unclear evaluation standards, and low student participation enthusiasm. In order to solve these problems, this article proposes some countermeasures, such as increasing certificate types, establishing evaluation standard systems, and strengthening student participation, in order to provide some reference for other professional groups to implement the 1+X certificate system.*

Keywords: *1+X Certificate System; Precision Intelligent Manufacturing Professional Group; Problem; Countermeasure*

1. Introduction

With the rapid development of China's economy, the precision intelligent manufacturing industry is increasingly receiving social attention. In order to cultivate more professional talents, vocational colleges have begun to explore the implementation of the 1+X certificate system to improve students' comprehensive quality and employment competitiveness. However, there are still some problems in the implementation of the 1+X certificate system in the precision intelligent manufacturing professional group. Based on this, this article takes the precision intelligent manufacturing professional group as an example to conduct a detailed analysis of the problems and countermeasures in the implementation process of its 1+X certificate system.

2. The definition and significance of the 1+X certificate system

2.1. Definition

The 1+X certificate system refers to a system in which vocational colleges combine students' vocational skills certificates with academic education in order to increase their professional literacy and employment competitiveness.[1] Among them, "1" refers to the educational certificate; "X" refers to several vocational skill level certificates, and the types and quantities of X certificates are determined by vocational colleges based on professional characteristics and job market demand. The system aims to improve students' practical operational skills and professional qualities, thereby making them more adaptable to the needs of society and enhancing their competitiveness in employment.

2.2. Meaning

2.2.1. Improving students' professional literacy and employment competitiveness

By obtaining a certain number of vocational skill level certificates, students can effectively improve their professional quality and employment competitiveness, making it easier for them to obtain satisfactory employment opportunities.

2.2.2. Cultivating students' practical operational skills

The 1+X certificate system can encourage students to actively participate in practical activities

during the learning process, improve their practical skills, and make them more suitable for the actual work environment.

2.2.3. Improving the teaching quality of vocational colleges

By implementing the 1+X certificate system, vocational colleges can better cooperate with vocational skill certificate issuing institutions and employers, understand market demand, adjust curriculum and teaching methods, and thereby improve teaching quality and employment quality.

2.2.4. Promoting the reform of vocational education and teaching

The 1+X certificate system is an important measure for vocational colleges to implement vocational education reform and development. It can promote vocational colleges to better utilize their own advantages and cultivate technical and skilled talents with vocational characteristics.

3. The necessity of implementing the 1+X certificate system for the precision intelligent manufacturing professional group

3.1. Promoting student career development

The implementation of the 1+X certificate system can effectively improve the professional abilities and qualities of vocational college students, and meet the demand of society for high-quality professional talents.[2] Especially in the current rapidly developing economic and technological environment, there is a greater need for talents with multiple vocational skills and knowledge. Therefore, for vocational colleges, implementing the "1+X certificate system" is not only conducive to improving the quality of education and teaching, but also meets the requirements of society for higher vocational education.

3.2. Improving professional quality and practical ability

Firstly, it can help students better understand the theoretical knowledge and practical skills of their major, making them more confident and competent in their future career. Secondly, obtaining a certificate can provide students with more job opportunities and development space, giving them an advantage in the workplace. In addition, by taking certificate exams and obtaining certificates, students can also make more contacts in the same industry, expand their social circle, and improve their professional literacy and interpersonal skills.[3]

3.3. Aligning with industry needs

With the continuous development of the social economy, the requirements for vocational skills are also constantly improving. The 1+X certificate system can help students timely understand industry development trends and needs, choose appropriate vocational skill level certificates and obtain them, and improve their professional literacy and practical abilities, in order to better adapt to the needs of career development.

At the same time, the implementation of the 1+X certificate system can also promote cooperation between universities and enterprises, achieving a positive interaction between education and industry. By conducting practical courses and projects, students can better understand the actual operation and management mode of enterprises, improve practical abilities and comprehensive qualities. At the same time, enterprises can also discover excellent talents and provide better internship and employment opportunities for students.

4. The problems faced by the implementation of the "1+X certificate system" in higher vocational colleges

4.1. Low enthusiasm for student participation

Due to the fact that the 1+X certificate system is not a necessary requirement for students to graduate, students may lack motivation to participate in learning. Because these certificates are not a necessary condition for graduation, students may think that studying these certificates is not something they must do. This may lead to a lack of awareness among students about the importance of vocational

skills certificates, leading to a lack of enthusiasm for certificate learning. In addition, some students may lack interest in certain certificates, which may lead to poor learning outcomes. Because these certificates require students to invest time and energy in learning, if students lack interest in these certificates, they may feel bored and frustrated with certificate learning, leading to poor learning outcomes.

4.2. There are differences in social recognition of certificates

After the implementation of the 1+X certificate system, there are differences in the recognition level of different certificates, and the recognition level of some certificates is not high, which may affect students' career development. This includes certificate review issues, and different certification authorities may have different standards and processes for certificate review. This requires schools and teachers to understand and master, and to communicate and coordinate effectively with certification authorities. At the same time, there are issues with the credibility and authority of certificates. Some certificate issuing agencies may have quality and management issues that may affect the authority and credibility of certificates. This may lead to difficulties for students in the job market, as some employers may not recognize certain certificates, thereby reducing students' competitiveness and employment opportunities.

4.3. Insufficient awareness of the importance of certificates among students

One of the problems in the implementation of the system is that students lack awareness and importance of certificates. Due to a lack of awareness among some students about vocational skills certificates, they may not be aware of the benefits of certificates for their future employment, thus neglecting the importance of certificates. In addition, some students may view certificates as a "bonus" and only study them to enhance their resume, rather than truly seeing them as a means to improve vocational skills. This cognitive deficiency may reduce students' enthusiasm and learning effectiveness for certificate learning.

5. Strategies for implementing the "1+X certificate system" in higher vocational colleges

5.1. Rich certificate types

Firstly, a vocational skills certificate is one of the important standards for measuring a person's professional abilities. In modern society, the requirements for vocational skills are becoming increasingly high, and people with vocational skill certificates are more likely to gain an advantage in the job market. For example, students studying mechanical manufacturing technology can prove their mastery of relevant vocational skills by obtaining a certificate of vocational skills in mechanical manufacturing, thereby occupying a more favorable position in employment. Secondly, language and computer certificates are also very important for the modern workplace. Finally, innovation and entrepreneurship certificates are very important for entrepreneurs. In modern society, entrepreneurship has become an increasingly popular choice. By obtaining an innovation and entrepreneurship certificate, students can better understand entrepreneurial knowledge and skills, and improve their entrepreneurial success rate.

5.2. Enhancing students' enthusiasm for participation

Firstly, vocational colleges can incorporate some certificate content into the teaching of relevant courses through curriculum design, achieving "integration of course certificates". Students can better grasp the certificate content during the learning process and improve their learning effectiveness. Secondly, vocational colleges can include some certificate exams as part of their curriculum assessment, such as incorporating computer or language certificate related exams into the assessment of related courses. In this way, students will pay more attention to certificate exams and increase their participation enthusiasm. In addition, vocational colleges can also provide certain incentive measures for students to actively participate in certificate exams. For example, vocational colleges can provide certificate training courses for students, or use the acquisition of vocational skills certificates as an indicator for scholarship selection, allowing students to participate more actively in certificate exams.

5.3. Strengthening teacher guidance

Vocational colleges should strengthen the training and guidance of teachers to improve their understanding and mastery of certificate types, learning methods, exam requirements, and other aspects. Through this approach, teachers can better guide students, help them better prepare for certificate exams, and improve their learning effectiveness and participation enthusiasm. At the same time, vocational colleges can establish specialized certificate guidance institutions to provide personalized guidance services for students. In this way, students can have a deeper understanding of the types of certificates, learning methods, exam requirements, and other aspects, acquire more comprehensive knowledge and skills, and improve their pass rate and overall quality of the certificate exam. In certificate guidance institutions, students can receive professional guidance and guidance to help them accurately grasp the requirements and difficulties of certificate exams, improve their answering skills and coping abilities. In addition, certificate guidance institutions can also provide students with corresponding learning materials, reference books, and practice questions to help them better review and prepare for exams.

5.4. Improving the pass rate and practicality of certificates

Vocational colleges should pay attention to the quality of students' learning and ensure that their level of passing certificate exams meets industry requirements. This requires vocational colleges to actively carry out various evaluations and monitoring, such as organizing regular evaluation meetings, establishing evaluation teams, collecting student feedback, etc., in order to timely understand students' learning situation and results, and provide guidance and assistance to students' learning process.

In addition, vocational colleges should actively guide students to choose certificates that are suitable for themselves, avoiding excessive pursuit of the number of certificates while neglecting the practical assistance of certificates for their career development. By analyzing and researching the types of certificates, career development prospects, and other aspects, guide students in formulating reasonable certificate plans to enhance the practical value and significance of certificates.

5.5. Strengthening cooperation with certification authorities

Schools can seek special government funding to reduce exam fees for students. In addition, schools can establish specialized certificate exam tutoring mechanisms to provide guidance and guidance for different certificate exams, helping students improve their pass rates. At the same time, schools and teachers should also strengthen the supervision and management of certificate exams to ensure the social recognition of certificates.

In addition, in order to better promote the development of education and teaching, vocational colleges can further deepen cooperation with certificate issuing institutions, carry out more practical courses and projects, and cultivate students' practical abilities and professional qualities. Schools and certification agencies can jointly develop practical examination standards and evaluation systems, establish assessment mechanisms for practical courses, and ensure that students' practical abilities are fully developed and recognized.

5.6. Establishing a certificate archive management system

Vocational colleges should establish a comprehensive certificate archive management system to record various types of certificate information obtained by students, including certificate names, acquisition dates, exam scores, etc., so that students can prove their professional abilities and skill levels to employers during employment. In addition, schools can also provide students with more personalized career planning and development suggestions through the certificate archive management system, so as to help them better plan their career development path and improve their employment competitiveness.

5.7. Strengthening communication with employers

Vocational colleges should actively establish contact with employers, understand their needs and requirements for various certificates, and provide more accurate certificate training and guidance for students. At the same time, schools can also collaborate with employers to provide students with more internship and employment opportunities, help them better integrate into the workplace, and improve

their professional literacy and practical abilities. In addition, schools can also collaborate with employers to carry out vocational skills competitions and practical projects, and provide students with more practical opportunities for certificate examination experience and practical ability training, in order to improve their professional competitiveness.

6. Conclusion

The implementation of the 1+X certificate system requires the joint efforts and support of all parties. Firstly, students need to actively participate in certificate exams and continuously improve their professional skills and comprehensive qualities. Teachers need to understand and master the content and standards of certificate exams, and provide targeted training and guidance for students. Schools need to collaborate with certification agencies to develop unified exam standards and evaluation systems, ensure the authority and credibility of certificates, and provide students with more choices and support. At the same time, government departments also need to actively support and promote the implementation and development of the 1+X certificate system, strengthen the supervision and evaluation of certificate issuing institutions, and promote the fairness and transparency of certificate exams. Only with the joint efforts of all parties can the role and effectiveness of the 1+X certificate system be truly realized, so as to promote the development of education and teaching towards professionalization and practicality, and jointly promote the further improvement and promotion of the 1+X certificate system.

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